

FURTHER NOTES ON AUSTRALIAN COLEOPTERA,
WITH DESCRIPTIONS OF NEW GENERA AND
SPECIES.

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XX.

PECTINICORNES.

AULACOCYCLUS.

A. errans, sp. nov. Minus latus; minus convexus; nitidus; rufo-brunneus; vertice cornuto, cornu adunco supra sulcato in apice emarginato; prothorace sulco marginali excepto sublævi (ut *A. edentuli*, Macl.), utrinque pone medium fovea curvata impresso; elytris minus fortiter striatis, striis æqualiter valde distincte punctulatis, puncturis in striarum interiorum parte antica quam in striis exterioribus haud minus perspicuis, interstitiis nullo modo convexis. Long., 11 l.; lat., 4 l.

The species of *Aulacocyclus* are extremely closely allied *inter se*, and most of the characters that have been relied upon in the brief published descriptions seem to be in reality of little value. The form of the frontal horn is certainly liable to some variation and the number of external teeth on the front tibiæ sometimes differs in the two tibiæ of the same specimen. Nor is the form and sculpture of the lateral fovea of the prothorax constant; I have examples in which the two fovea of an individual specimen are by no means identical. The only constant characters I can find (apart from the size which does not seem to vary much) are in the striation and puncturation of the upper surface. The present species is very easily recognised by its prothorax almost without puncturation (as in *A. edentulus*, Macl., the commonest species of the genus in my experience) in combination with elytra comparatively feebly striate but having their striæ extremely evenly punctulate (so that the punctures are scarcely less defined in the front part of the subsutural striæ than in the lateral striæ.

Australia; I do not know the exact habitat but believe it to be tropical.

A. collaris, sp. nov. Minus latus; modice convexus; nitidus; niger; vertice cornuto, cornu adunco supra sulcato in apice emarginato; prothorace subtiliter distincte sat crebre punc-

tulato, utrinque pone medium fovea curvata (hac haud vel minus distincte punctulato) impresso; elytris fortiter striatis, striis interioribus vix distincte (ut *A. edentuli*, Macl.) exterioribus sat fortiter (quam *A. edentuli* magis fortiter) punctulatis, interstitiis sat fortiter convexis. Long., 10—11 l.; lat., $3\frac{2}{5}$ —4 l.

Easily distinguishable by its prothoracic puncturation much more distinct than in any other (at any rate than in any other known to me) of its congeners, in all of which the punctures are very sparse and discernible only with a strong lens (e.g., a Codrington), while in the present species they are notably less sparse and quite distinct under a very ordinary lens. Compared with *A. edentulus* moreover this insect is smaller, narrower, more nitid and blacker, with the punctures of the external elytral striæ very much stronger. The elytral interstices moreover are evidently more convex than in *A. edentulus*, but I do not lay much emphasis on this character as the interstices of the elytra seem to vary in convexity within the limits of a species,—probably sexually.

The genus *Aulacocylus* is one presenting very great difficulty on account of the externally close alliance *inter se*, and the brevity of the descriptions, of its species. Seven names have I believe been given to Australian species (if *Rosenbergi*, Kaup, be Australian which however seems doubtful). Two of these (according to Gemminger and Harold) are synonyms of *edentulus*, Macl., and this is probably a correct reference. *Kaupi*, Macl., I strongly suspect of being another synonym of the same species. *Rosenbergi*, Kaup, and *Percheroni*, Kaup, seem incapable of identification without examining the types. They are said to be remarkable for the shortness of their frontal horn and the feebleness of their elytral puncturation. Gemm. and H. regard them as referring to only one species. *Teres*, Perch., seems to be a good species (unknown to me) fully twice as large as the species I have described above. I have examined the type of *edentulus*, Macl., and I think it is the species Burmeister applies the name to, though in that case his description cannot be called a good one, as it emphasises characters that do not seem to be constant.

LAMELLICORNES.

ISODON.

I have lately had occasion to attempt the determination of a number of examples some (at least) of which are referable to this genus, and have arrived at a conviction that no satisfactory generic distinction can be drawn among the Australian species that have been referred to *Isodon* and *Heteronychus*. On first

thoughts these two genera might be supposed incapable of confusion, because according to their diagnoses (*e.g.*, Lacordaire's Gen. Col., vol. III.) *Heteronychus* should have organs of stridulation on the propygidium and unequal claws on the front tarsi of the male, while in *Isodon* the organs of stridulation should be wanting and the male claws simple. But I find various combinations of these characters in species that are extremely closely allied even specifically, some with organs of stridulation having equal and others unequal claws in the male.

The species that I am referring to agree in the following characters which in combination distinguish them from all other Australian *Dynastides* known to me,—*viz.*, prothorax usually with well-marked sexual characters (in no instance known to me quite alike in the sexes), hind tibiæ with very strong apical ciliæ, basal joint of hind tarsi only feebly dilated at the apex, club of antennæ not extraordinarily developed in the male, three external teeth (only) on the front tibiæ, one of the two apical spines of the hind tibiæ inserted more or less behind the base of the tarsus (in *Nephrodopus*, &c., it is differently placed), mentum of normal form (not as in *Teinogenys*, &c.), head not armed with a horn in either sex (at most a very small conical tubercle), clypeal suture well defined and not strongly angulate hindward in the middle (as it is in *Dasygnathus*, &c.), sides of clypeus sinuate, mandibles visible, labrum not prominent, front marginal furrow of prothorax not angulate hindward in middle (as it is in *Adoryphorus*, &c.).

Fourteen Australian species presenting the above characters have been described (inclusive of *Cheiroplatys pecuarius*, Reiche, which I have no doubt is an *Isodon*). Of these three (*viz.*, *I. lævicollis*, Macl. and *glabricollis*, Macl. and *H. vulgivagus*, Oll.) appear to have been described without any knowledge of the male, and as the characters necessary to be known before their males can be identified are not given, I fear they must be treated as incapable of certain identification from description. Nevertheless, I am fairly confident that I have not seen any of them. *I. subcornutus*, Fairm, is probably identical with *pecuarius*, Reiche, so that there are only ten species of which the male has been described.

Four of these ten were described by Burmeister, but unfortunately very briefly; *Australasia*, Burm., happens to possess well-marked characters by which it can be identified, but the other three (all from W. Australia) present great difficulties. *P. curtus*, Burm., is described without the mention of a single valuable character, unless it be "the second row of punctures from the suture (on the elytra) is the least regularly seriate." I have

not seen any species presenting that peculiarity.* *P. laticollis* has no characters assigned to it that seem really distinctive beyond that the prothorax is scarcely punctulate and the elytra has nine straight rows of punctures; characters which I cannot find in combination in any *Isodon* before me. *P. lævigatus* seems to be a peculiar species with the upper surface almost lævigate and the clypeus not at all produced; I have before me several species almost without puncturation on the upper surface, but the only one that has not some other strongly marked character (totally inconsistent with its being *lævigatus*) has the clypeus more strongly produced than in any other *Isodon* known to me. I find it difficult to believe that none of these three species are before me, and yet I am compelled to proceed on that assumption.

Reiche has described one species (*pecuarius*). It is common and widely distributed, and is possibly identical with *curtus*, Burm.

The remaining five species are Sir W. Macleay's. Two of these (*Heteronychus*† *picipes* and *irregularis*) are black species with two tubercles on the clypeal suture, which I am confident that I have not before me. One species (*Heteronychus lucidus*, from King's Sound, N.W.A.) is described as having the prothorax of the male with a frontal tubercle but without any excavation; I have not seen this species. *Isodon picipennis* (from King's Sound, N.W. Australia) is described as being black except the elytra which are red, the prothorax impunctate except on the anterior and lateral margins and the elytra coarsely punctulate; I have not seen any species likely to be this one; there is no information given regarding the claws of the male or the organs of stridulation, so I cannot place it. *Isodon puncticollis* is known to me, Mr. Masters having lent me a type.

It appears, then, that of the 14 descriptions existing of species attributable to the genus *Isodon* as I have characterised it above, one (and perhaps two) provides a synonym and that three are invalidated by their relating only to the female, so that only nine can be regarded as referring to decidedly distinct species

* Since writing the above I have found among some *Dynastides* from W. Australia sent by Mr. Lea for my inspection a species which seems very likely to be *I. curtus*, Burm. The claws of its male are simple, and it has no organs of stridulation. It is quite distinct from all the species of *Isodon* described or tabulated in this memoir, *inter alia multa* by its considerably smaller size.

† Through the courtesy of Mr. Masters I had the advantage some time ago of seeing an example of *H. picipes*, but did not take sufficient note of it to say much about it now beyond that it is distinct from any of the species treated in the following pages. I can say, however, that one of the claws on the front tarsi of the male is bifid.

and that I have good reason to believe only three of those nine to be before me.

With these introductory remarks I will proceed to furnish a tabulated statement of the characters of the species known to me, from which I have to exclude all the species not in my possession on account of there not being one of them of which the organs of stridulation have been definitely described.

I regret that I am not able to deal more comprehensively with these insects, but hope nevertheless that my work (such as it is) will be useful as forming a foundation on which better work may be done in the future to elucidate a genus whose species have not yet been treated with anything more systematic than isolated diagnoses.

Referring to the diagnoses which follow I may say that I have not included in them characters that seem to be generic, such as the presence of villosity on the undersurface and legs, the antennal structure, &c., as it needlessly lengthens descriptions to include in them matters that do not concern specific distinctions.

- A. Front claws of male simple.
- B. Propygium with organs of stridulation.
- C. These organs consist of two longitudinal rows of numerous fine rugæ.
- D. Base of prothorax with a continuous marginal border *pecuarius*, Reiche.
- DD. Base of prothorax margined only close to the sides *puncticollis*, Macl.
- CC. The organs of stridulation consist of only one or two much larger and more elevated rugæ *Meyricki*, Blackb.
- BB. Propygidium devoid of organs of stridulation.
- C. Elytra very coarsely punctulate.
- D. Prothoracic puncturation comparatively fine *Australasiae*, Hope.
- DD. Prothoracic puncturation extremely coarse *Terra-reginae*, Blackb.
- CC. Elytra with scarcely visible puncturation *nasutus*, Blackb.
- AA. One of the front claws of male bifid (propygidium with organs of stridulation in all the species known to me).
- B. Two tubercles on the clypeal ridge.
- C. Elytra distinctly punctulate *bidens*, Blackb.
- CC. Elytra almost without puncturation *levipennis*, Blackb.
- BB. Clypeal ridge without tubercles *intermedius*, Blackb.
- I. *Meyricki*, sp. nov. Mas. Sat late ovatus; nitidus; obscure ferrugineus, capite prothoraceque nigricantibus, antennis palpisque brunneo-testaceis; clypeo sparsim punctulato, vix ruguloso, antice rotundato-truncato, marginibus sat reflexis, lateribus sat fortiter sinuatis; fronte a clypeo per carinam simplicem divisa, sparsim leviter ruguloso-punctulata; pro-

thorace quam longiori sesquialtiori, sparsissime subtilissime punctulato, antice sat profunde excavato, margine basali continuo quam margo anticus (hoc in medio tuberculo magno armato) ut $1\frac{3}{4}$ ad 1 latiori, angulis anticis obtusis antrorsum vix prominentibus posticis obtusis; scutello sat lævi; elytris subtilius sat leviter punctulatis (seriebus 3 inter callum humeralem et striam subsuturalem, serie 1^a a scutello et a callo humerali circiter æquidistanti, area lata inter seriem 1^{am} et striam subsuturalem lævi, seriebus 2 ultra callum humeralem, area lata inter series 3^{am} et 4^{am} confuse punctulata, area lata marginali fere lævi, parte apicali subfortiter punctulata); propygidio stridulationis organis instructo (his rugis paucis sat fortiter elevatis compositis); pygidio antice rugulose minus crebre punctulato, postice lævi; tibiis anticis extus fortiter tridentatis; tarsorum unguiculis simplicibus. Long., 6 l.; lat, $3\frac{1}{2}$ l.

Fem. latet.

The sculpture of the elytra is not unlike that of *I. pecuarius*, Reiche, but is more feebly impressed, with a comparatively wide marginal space almost impunctulate. The excessively fine and sparse puncturation of the prothorax and the different structure of the organs of stridulation at once separate this insect from *pecuarius*.

W. Australia; taken by E. Meyrick, Esq.

I. Terræ-reginæ, sp. nov. Mas. Sat breviter subovatus; sat nitidus; nigro-piceus, antennis palpis corpore subtus et pedibus dilutionibus; clypeo sparsius subtilius punctulato, antice abrupte truncato, angulis anticis extrorsum acutis, lateribus fortiter sinuatis fere angulatis; fronte a clypeo per carinam in medio vix tuberculatam divisa, sat fortiter crebre rugulosa; prothorace quam longiori paullo plus quam sesquialtiori, fortiter minus crebre punctulato, antice vix depresso, basi haud marginata quam apex (hoc in exemplo typico haud tuberculato) ut $1\frac{3}{4}$ ad 1 latiori, angulis anticis subacutis antrorsum leviter prominulis posticis rotundato-obtusis; scutello subtiliter sparsius punctulato; elytris grosse punctulatis (seriebus 4 inter callum humeralem et striam subsuturalem, serie 2^a a scutello et a callo humerali circiter æquidistanti, area sat angusta inter seriem 1^{am} et striam subsuturalem grosse confuse punctulata, puncturis grossis sat seriatim dispositis ad marginem lateralem continuis); stridulationis organis nullis; propygidio sat opaco sparsius squamose punctulato; pygidio nitido, puncturis sat grossis squamosis cum aliis minoribus sat crebre (prope apicem sparsim) impresso; tibiis anticis extus sat fortiter tridentatis; tarsorum unguiculis simplicibus.

Fem. latet. Long., $6\frac{1}{2}$ l.; lat., 4 l (vix).

Closely allied to the species which I take to be *I. Australasiæ*, Hope, differing from it chiefly by the frontal carina being scarcely tuberculate and the prothorax considerably more rounded on the sides and much more coarsely punctulate.

Queensland.

I. nasutus, sp. nov. Mas. Late ovatus; brevis; nitidus; piceus, capite prothoraceque obscurioribus, antennis palpisque rufis; clypeo anguste valde producto, sat crebre ruguloso, antice reflexo-truncato, marginibus leviter reflexis, lateribus fortiter subangulatim sinuatis; fronte a clypeo per carinam (hac in medio quam latera versus paullo magis elevata) fere rectam divisa, sat crebre rugulosa; prothorace quam longiori paullo plus quam sesquialtiori, vix perspicue punctulato, antice sat profunde excavato, basi haud marginata quam apex (hoc in medio tuberculo acuto armato) duplo latiori, angulis anticis sat acutis sat prominulis posticis rotundatis; scutello lævi; elytris sublævibus nitidissimis (seriebus circiter sex puncturarum obsoletissimarum et puncturis obsoletis prope apicem nonnullis vix perspicue impressis); propygidio (hoc stridulationis organo haud instructo) pygidioque leviter sparsim punctulatis; tibiis anticis extus fortiter tridentatis; tarsorum unguiculis simplicibus.

Fem. latet. Long., $6\frac{1}{2}$ l.; lat., 4 l.

This species, as noted above, must be much like *I. lævigatus*, Burm., but its strongly and comparatively narrowly produced clypeus is quite inconsistent with its being that insect.

W. Australia.

I. bidens, sp. nov. Mas. Subovatus, minus latus; sat nitidus; rufobrunneus, antennis palpisque dilutioribus; clypeo sat late minus fortiter producto, sat crebre ruguloso, antice bidentato, marginibus sat reflexis, lateribus minus fortiter sinuatis; fronte a clypeo per carinam in medio sat fortiter bituberculatam (hac inter tuberculos interrupta) divisa, antice crebre subtilius rugulosa postice sublævi; prothorace quam longiori sesquialtiori, sparsim subtiliter punctulato, antice leviter excavato, basi haud marginata quam apex (hoc in medio fortiter bituberculato) fere duplo latiori, angulis anticis minus prominulis subacutis posticis rotundato-obtusis; scutello sublævi; elytris subfortiter punctulatis (seriebus 4 inter callum humeralem et striam subsuturalem, serie 1^a a scutello et a callo humerali circiter æquidistanti, seriebus 2 ultra callum humeralem, area inter series 4^{am} et 5^{am} confuse punctulata, area ultra seriem 6^{am} fere lævi, parte apicali subfortiter punctulato); propygidio stridulationis organo instructo (his rugis numerosis minus elevatis com-

positis); pygidio fere lævi vel puncturis sparsissimis vix impresso; tibiis anticis extus fortiter tridentatis; tarsorum anticorum unguiculo externo bifido.

Fem. differt prothorace antice haud tuberculato, magis perspicue punctulato; unguiculis simplicibus; segmento ventrali apicali magis elongata, postice haud emarginato. Long., $7\frac{1}{2}$ —8 l.; lat., $4\frac{1}{3}$ — $4\frac{2}{3}$ l.

The male is easily recognised by the tubercles arranged in three pairs—one pair on front of the clypeus one on the clypeal suture and one on the front margin of the prothorax. If *Heteronychus vulgigagus*, Oll., was founded on a female example (as seems probable from the description) it is just possibly this species. The female however does not agree satisfactorily with Mr. Olliffe's description which mentions eight rows of punctures on the elytra—a number that can be attained only by counting in the confused puncturation between the rows—nor is the form of the clypeus at all satisfactorily characterised by the expression "head bisinuate in front." It may be noted that the male of this species (as of all its allies) has the apical ventral segment short, and gently emarginate behind; also that in this species the prothoracic quasi-excavation is small in area and is little more than a slight flattening of the surface.

N. Queensland; sent to me by Mr. French.

I. lævipennis, sp. nov. Mas. Ovatus, minus brevis; nitidus; brunneus, antennis palpis coxisque dilutioribus; clypeo modice producto, sat fortiter (plus minusve transversim) ruguloso, antice bidentato, marginibus modice reflexis, lateribus modice sinuatis; fronte a clypeo ut *I. bidentis* divisa, sat fortiter (postice minus distincte) ruguloso; prothorace quam longiori sesquialtiori, vix manifeste punctulato, antice subfortiter excavato, basi haud marginata quam apex (hoc in medio tuberculo parvo armato) plus quam duplo latiori, angulis anticis subacutis subprominulis posticis rotundato-obtusis; scutello sublævi; elytris fere lævibus, striis vix manifestis vix manifeste punctulatis impressis; propygidio stridulationis organis instructo (his rugis circiter sex sat elevatis compositis); pygidio sublævi; tibiis anticis extus minus fortiter tridentatis; tarsorum anticorum unguiculo externo bifido.

Fem. differt prothorace nec excavato nec tuberculato; unguiculis simplicibus; segmento ventrali apicali magis elongato, postice haud emarginato. Long., 6—8 l.; lat., 4— $4\frac{1}{2}$ l.

Easily distinguished from all known to me of its congeners by its elytra devoid of puncturation or at most with only a few punctures here and there, and they so faintly impressed as to be

scarcely traceable. The prothoracic excavation of the male is of small area but moderately deep.

W. Queensland (Mr. French); also taken by me near Oodnadatta in Central Australia.

I. intermedius, sp. nov. Mas. Sat late ovatus; nitidus; piceo-brunneus, antennis palpis pedibusque rufescentibus; clypeo minus producto, sat crebre ruguloso, antice rotundato-truncato, marginibus sat late sat fortiter reflexis, lateribus modice sinuatis; fronte a clypeo per carinam simplicem sat elevatam divisa, ut clypeus rugulosa; prothorace quam longiori plus quam sesquialtiori, sparsim subtilissime punctulato, antice sat fortiter excavato, basi haud marginata quam apex (hoc in medio tuberculo modico armato) plus quam duplo latiori, angulis anticis minus prominulis vix subacutis posticis rotundatis; scutello sublævi; elytris sat subtiliter punctulatis (seriebus 4 inter callum humeralem et striam subsuturalem, serie 2^a a scutello et a callo humerali circiter æquidistanti, area minus lata inter seriem 1^{am} et striam subsuturalem puncturis nonnullis impressa, parte extra seriem 4^{am} confuse punctulata sed 1 vel forte 2 series sat distinctas ferenti, parte submarginali antice sat lævi postice subtiliter punctulata); propygidio stridulationis organo instructo (his rugis numerosis minus elevatis compositis); pygidio nitido, antice et latera versus sparsim punctulato; tibiis anticis extus sat fortiter tridentatis; tarsorum anticorum unguiculo externo bifido.

Fem. latet. Long., 7 l.; lat., 4½ l.

Superficially this species closely resembles *I. pecuarius*, Reiche, *puncticollis*, Macl. and *Meyricki*, Blackb., and it would certainly be most unnatural to separate it from them generically—nevertheless its claw structure places it with *I. levipennis*, Blackb., and *bidens*, Blackb., which if I had not seen this species I should be disposed to regard as generically distinct from *I. pecuarius*, &c. The prothoracic excavation in this species is large and deep as in *I. Meyricki*.

Queensland.

CHEIROPLATYS.

This genus is distinguishable from the other Australian *Dynastides* by the following characters in combination, viz., prothorax not simple in either sex (a tubercle or horn on the frontal margin in both sexes), hind tibiæ strongly ciliated at apex, basal joint of hind tarsi only moderately dilated at apex, club of antennæ not extraordinarily developed, front tibiæ externally bidentate or scarcely dentate at all in the male (tridentate in the female), one of the two apical spines of the hind tibiæ

inserted close to (or behind) the base of the tarsus, claws simple, mentum of normal form (not as in *Teinogenys*, &c.), head not armed with a horn in either sex, clypeal suture not or scarcely angulate in the middle, sides of clypeus not sinuate, mandibles invisible in repose, labrum strongly prominent, front marginal furrow of prothorax not or scarcely angulate hindward in middle, apical ventral segment traversed by a transversely sinuous furrow much more strongly defined in the female than in the male. All the species that I have examined are fulvo-hirsute on the underside and none of them have organs of stridulation. Eleven species have been attributed to this genus, of which two (*Ixion* and *porcellus*) are Boisduval's and are said to be identical with *curtus*, Guér., and *latipes*, Guér., respectively. As there is no evidence from Boisduval's descriptions that they are members of this genus I have no opinion as to the correctness of this alleged synonymy, but at any rate *Ixion* and *porcellus* may be eliminated from the list of valid species of *Cheiroplatys*. (*Scarabæus*) *curtus*, Guér., has been erroneously associated with *Cheiroplatys*, as Burmeister has pointed out. That learned author considers from the description that it is probably a *Dasygnathus*; to me the description reads more like that of a *Semanopterus*. To this latter genus I think Castlenau's species (*Phileurus subcostatus*) must certainly be referred, while (as pointed out above) *C. pecuarius*, Reiche, is an *Isodon*. Sir W. Macleay's two species (both from tropical Australia) seem to me very doubtfully referable to this genus, inasmuch as one of them (*C. inconspicuus*) is described as having its clypeus "broadly rounded and slightly emarginate in front" (a form to which no *Cheiroplatys* that I have seen approaches) and the other (*C. occidentalis*) as having its front tibiæ "bluntly tridentate" externally. If the type of *C. occidentalis* is a male (as the description implies) I doubt its being rightly placed in the genus; if it is a female it may be a *Cheiroplatys*, but in either case I am quite confident I have not seen it. Thus of the eleven species that have been associated with *Cheiroplatys* five must be definitely rejected, and two if rightly placed in the genus are very abnormal species that I have not seen. Of the remaining four I think I know *C. mælius*, Er., and I have examples which seem likely to be *C. latipes*, Guér., and *juvencus*, Burm. (as there does not seem to be any means of arriving at certainty on these identifications I propose furnishing characters that will enable these two species to be recognised, and claiming those names for them until cause be shown to the contrary). *C. lævipès*, Burm., I am fairly certain I have not seen. It is described as a large species (one inch long) with the clypeus strongly elevated in front, with the prothorax strongly punctulate in front but smooth along the base and

having a deep excavation in the male, and with the external margin of the front tibiæ entirely without teeth in the same sex.

The following is a tabulation of the species known to me of this genus. *C. lævipes* I have placed on the strength of characters furnished by Burmeister's description. Of *C. mælius* I have little doubt that I possess an example (from Tasmania), but it is a female, and moreover disagrees with the description in having a slight impression on its prothorax; it is better therefore not to risk confusion of synonymy by treating this identification as reliable, and the description (taken alone) is not detailed enough to enable me to point out distinctive characters. Neither of Sir W. Macleay's descriptions furnishes sufficient information for placing the species referred to in a tabulation, although (as already pointed out) characters are mentioned that satisfy me I have not seen the insects.

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|------|---|--------------------------------|
| A. | Base of the prothorax distinctly margined all across, scarcely obsoletely even in the middle. | |
| B. | Two excavations on the prothorax (one behind the other, each preceded by a tubercle). | |
| C. | Prothorax very sparsely punctulate | ... <i>bifossus</i> , Blackb. |
| CC. | Prothorax closely punctulate | ... <i>accedens</i> , Blackb. |
| BB. | Prothorax with only one excavation and one tubercle. | |
| C. | Prothorax closely evenly and strongly punctulate | ... <i>compactus</i> , Blackb. |
| CC. | Prothorax much more sparsely and finely punctulate | ... <i>juvencus</i> , Burm. |
| CCC. | Prothorax closely punctulate in front, lævigata across the basal part... | ... <i>lævipes</i> , Burm. |
| AA. | Base of prothorax unmargined except close to the hind angles. | |
| B. | Prothorax closely and strongly punctulate | ... <i>latipes</i> , Guér. |
| BB. | Prothorax very sparsely and finely punctulate | ... <i>pygmeus</i> , Blackb. |

Regarding the statements of Burmeister and Erichson that the females of *C. juvencus* and *C. mælius* have no prothoracic impression, I may say that having examined a considerable number of females of this genus I have not seen one in which there is no trace of a prothoracic impression, and I am of opinion that the statements referred to are incorrect, their authors having either passed over a very slight impression as undeserving of mention or mistaken a female of another genus (*e.g.*, *Novapus* or *Isodon*) for a *Cheiroplatys*. I have invariably found that the female reproduces the prothoracic characters of the male in a modified form, *e.g.*, when the male has two strong excavations and two strong tubercles the female has two light impressions and two very small tubercles.

C. bifossus, sp. nov. Mas. Late subovatus; modice nitidus; colore variabilis (nigropiceus, vel brunneus); clypeo transversim ruguloso, antice truncato, marginibus erectis nec

altis (antice quam ad latera magis elevatis), lateribus rectis obliquis; fronte a clypeo per carinam sat rectam divisa sat rugulosa; prothorace quam longiori circiter sesquialtiori, longitudinaliter obsolete canaliculato, subtilius sparsius (antice ad latera sat crebre) punctulato, antice excavationibus 2 minoribus sat profundis impresso, ante excavationem utramque tuberculo magno armato, margine basali continuo quam margo anticus circiter ut $1\frac{3}{4}$ ad 1 latiori, angulis anticis acutis posticis rotundato-obtusis; scutello subtilius ruguloso; elytris stria punctulata subsuturali profunda et puncturarum seriebus 8 (his per paria, vix manifeste in striis, dispositis) impressis, seriebus externis minus distinctis, pari 2° (a sutura enumerato) quam cetera breviori sed sat longe ultra elytrorum medium continuo, puncturis basin versus sat magnis sat profunde impressis postice gradatim subtilioribus, interstitiis inter paria puncturis (his serierum puncturis similibus) confuse impressis; pygidio confuse punctulato (sc. puncturis minutis sat crebris apicem versus minus crebris, et aliis majoribus apicem versus valde grossis, impresso); tibiis anticis fortiter dilatatis, extus ad medium subacutis dentatis, parte dimidia apicali extus bisinuata. Long., 13 l.; lat., $7\frac{1}{3}$ l.

Owing to the reflexed front margin of the clypeus being gradually elevated from the sides to the middle and a little turned back, the front of the clypeus though in reality almost squarely truncate appears (if looked at from in front of it) to be strongly emarginate. The prothorax is scarcely narrower at its widest than the widest part of the elytra. A female example is unfortunately in extremely bad condition having evidently been found dead after long exposure to the elements. Its sculpture is much worn away and its front tibiæ are broken, but I can see that it has been almost identical with the male except in the prothoracic excavations much shallower, their tubercles very slight and the usual sexual differences in the ventral segments. Its form is somewhat narrower and more strongly convex than that of the male. The part of the apical ventral segment in front of the sinuous furrow is closely and rugulose but not coarsely punctulate, the rest of the segment nitid and almost without punctures. Similar sculpture exists on the corresponding segment in the male, but the furrow is so faint and so near the front margin of the segment that the sculpture needs careful looking for. In this species the puncturation of the prothorax is distinctly sparse; if it be carefully examined it will be seen that the intervals between puncture and puncture (except near the front angles) are for the most part quite equal to twice the diameter of an individual puncture.

Victoria.

C. accedens, sp. nov. Mas. Præcedenti (*C. bifosso*) valde affinis; differt statura minus lata, prothorace quam longiori paullo minus quam sesquialtiori, crebre minus subtiliter punctulato, margine basali quam margo anticus fere duplo latiori, pygidio (parte antero-exteriori excepta) haud puncturis minutis impresso; cetera ut *C. bifossus*.

Femina quam mas paullo minus lata magis convexa, prothoracis excavationibus et tuberculis subobsoletis, tibiis anticis extus obtuse distincte tridentatis. Long., 10—12 l.; lat., 5—6½ l.

This species is so like the preceding (*C. bifossus*) that the detailed description of the latter may be read as applying to it, subject to the distinctions noted. The puncturation of the prothorax is very widely different; if it be closely examined it will be seen that the intervals between puncture and puncture are for the most part scarcely equal to the diameter of a puncture. I have seen half-a-dozen specimens of this insect apparently all taken in company by Mr. Lea, and have taken others singly myself, and find that they vary very little except in the development of the prothoracic inequalities and to some extent in the closeness of puncturation on the pygidium. I find throughout the Australian *Dynastides* that the sculpture of the pygidium is a singularly unreliable character. The sculpture of the apical ventral segment in this species is as in *C. bifossus*. The front of the clypeus (looked at from in front) appears a trifle less strongly emarginate.

N.S. Wales; Forest Reefs; also Blue Mountains.

C. latipes, Guér. I have seen only a single female example (which was taken near Sydney) of a *Cheiroplatys* that can be called "oblong," the term its author and also Boisduval use to describe the form of *C. latipes* or "elongate-cylindric" (Burmeister's term). As it agrees very fairly with the diagnosis in other respects I take the example in question to be *C. latipes*. It is however not the *Cheiroplatys* that is evidently most common in the neighbourhood of Sydney, which I believe to be *C. juvenus* and refer to under that name below. Its length is 11½ l., its breadth 5 l. Its color on the upper surface is nearly black, on the under-surface red-brown. Its head is like that of *C. bifossus* except that the clypeus is more evenly and less strongly elevated in front, so that looked at from the front it appears very little sinuate. Its prothorax has only one impression (fairly strong in the example before me) and one tubercle, with puncturation (even closer than in *C. accedens*) much stronger and closer than that of *C. bifossus*, the base is distinctly margined only close to the hind angle. Its scutellum has no punctures except in two small clusters near the front. Its elytra are sculptured much like those of *C. bifossus* except that the intervals between the sub-

sutural stria and the first pair of rows of punctures, and between the first and second pairs of rows of punctures (are not confusedly and rather closely punctulate but) bear only a few punctures and they placed interruptedly in a longitudinal direction. Its pygidium is somewhat irregularly studded with rather large isolated punctures with which fine punctures are not intermingled except in the antero-external corners (and there not very closely). In other respects the description of *C. bifossus* applies to the present species.

C. compactus, sp. nov. Mas. *C. bifosso* sat affinis; minor; prothorace excavatione 1 et cornu brevi 1 solis instructo, multo magis crebre magis fortiter (fere ut *C. accedentis*) punctulato; scutello (parte antica subtilius rugulosa excepta) lævi; elytrorum interstitio inter striam subsuturalem et puncturarum seriatarum par primum magis grosse minus crebre (et inter paria primum et secundum serie unica) punctulatis, parte submarginali et apicali multo magis crebre punctulata; pygidio puncturis minutis minus crebre vel vix impresso; tibiaram anticarum parte apicali dilatata haud extus bisinuata.

Feminae prothoracis excavatione et tuberculo subobsoletis; tibiis anticis extus obtuse tridentatis. Long. 10½—11 l.; lat., 6 l.

This species has a single large excavation and horn-like tubercle on its prothorax, with close comparatively coarse puncturation resembling that of *C. accedens*. Its elytra have their first interstice (between the subsutural stria and the first pair of rows of punctures) confusedly and strongly but not closely punctured, while the interstice between the first and second pairs of rows of punctures bears a single row of strong punctures. The pygidium of the male type has fine puncturation mixed with the coarser punctures but less closely than in *C. bifossus*; that of the females before me has very little fine puncturation. Compared with *C. latipes* (female) the female of this species is much less narrow and cylindric, with the prothorax evidently less closely punctulate, the first elytral interstice much more punctulate. The space in front of the furrow on the last ventral segment is closely rugulose and somewhat finely punctulate.

S. Australia.

C. juvenicus, Burm. The insect which I take to be this species is, I should judge, not uncommon in the neighborhood of Sydney; for though I have never taken it myself in my occasional collecting there I have not infrequently received it from Sydney correspondents. Comparing it with the description of *C. bifossus* (above) I find the following distinctions: the clypeus is very little elevated along its front margin and not more so in its

middle than at the sides, so that viewed from in front it appears only slightly emarginate; its size is much smaller (long., $8\frac{1}{2}$ —11 l.); its prothorax has only one excavation (a very large one) and only one tubercle (which is of the form of a short horn); its scutellum is lævigata except near the front where it is finely and closely rugulose; its elytral puncturation is a little finer and much less plentiful, the first interstice bearing only sparse confused punctures, the interstice between the first and second pairs of rows of punctures only a more or less interrupted row of fine punctures, and that between the second and third pairs only fine punctures usually disposed in a more or less interrupted row; the pygidium is devoid or nearly so of fine puncturation; the space in front of the furrow on the apical ventral segment is in the female almost without punctures or (in some examples) very sparingly punctulate; the apical dilatation of the front tibiæ of the male is not bisinuate externally.

C. pygmæus, sp. nov. Fem. Sat late subovatus; *C. bifosso* affinis; differt statura multo minore; prothorace multo magis sparsim punctulato, excavatione et tuberculo unicus instructo, ad basin haud marginato; elytrorum interstitio 1° sparsim, 2° 3° que uniseriatim, punctulatis; pygidio puncturis minutis haud impresso; cetera ut *C. bifossus*. Long., $7\frac{4}{5}$ l.; lat., $4\frac{2}{3}$ l.

I have ventured to describe this female because I have before me also a male (belonging to Mr. Lea) which however is slightly deformed I think and therefore not suitable to be regarded as a type; its elytra bear some unsymmetrical gibbosities which look as if caused accidentally, probably in the pupal condition. I can say however that it presents all the characters noted above as distinguishing the female from *C. bifossus*, also that the apical dilatation of its front tibiæ is not bisinuate externally.

This species differs from all those mentioned above in the extremely sparse puncturation of its prothorax on which (except near the front and lateral margins) the intervals from puncture to puncture are for the most part about three or four times the diameter of a puncture. It also differs in the base of its prothorax unmarginated except close to the hind angles. In the female the space on the apical ventral segment in front of the furrow is almost without punctures. The pygidium of the male example is notably less closely punctulate than that of the female and of *C. bifossus*.

N.S. Wales; taken by Mr. Lea near Forest Reefs.

NOVAPUS.

N. bidentatus, Blackb. In a recent re-examination of the *Dynastides* in my collection I observed with regret that this species is a *Xynedria* and that I was in error in describing it as

a *Novapus*. Moreover I am of opinion that it is not even specifically valid but is simply a very large example, with sexual characters very strongly developed of my *X. interioris*. *N. bidentatus* therefore must be regarded as a synonym of *X. interioris*.

N. crassus, Shp. I have recently examined male specimens from W. Australia (forwarded by Mr. Lea) of what I have no doubt is this insect. It is certainly distinct from all the *Novapi* that I have described, being nearest to *N. Adelaidæ* (from which it differs *inter alia* by its larger size, scutellum strongly and closely punctulate at least in the front of the middle part, and evidently larger and coarser elytral punctures).

ASEMANTUS (gen. nov. *Dynastidarum*).

Mentum ovale, antice minus angustum; maxillæ robustæ 6-dentatæ; mandibula magna superne conspicua ad apicem obtuse (extus nullo modo) dentata; clypeus a fronte vix distinctus antice angustatus ad apicem recurvus, frons media tuberculo crasso brevi armata; antennæ 10-articulatæ flabello modico; prothorax antice sat late minus profunde excavatus, postice fovea magna (hac puncturis sat grossis impressa) instructus; elytra sat convexa, puncturis seriatis geminatim impressa, interstitiis haud vel vix convexis; pedes robusti, tibiis anticis extus tridentatis posterioribus 2-carinatis, tarsorum posticorum articulo basali (præsertim feminae) extus sat fortiter lobato, tarsorum anticorum maris unguiculis inæqualibus, tibiis posticis ad apicem lobatis ciliatis; stridulationis organa nulla.

This genus is very close to *Semanopterus* but differs from it by the short basal joint of its hind tarsi which is strongly dilated externally at the apex in a kind of lobe (especially in the female) and by the claws of the front tarsi in the male being unequal (one of them is thicker than the other and is abruptly turned back under the claw joint). The sexes present no distinguishing characters on the upper surface; the apical ventral segment is (as in allied genera) widely and feebly emarginate in the male. The only species I can refer to the genus is one which I believe to be *Semanopterus subæqualis*, Hope, but Hope's description is so defective that it is impossible to be very confident of this identification; the description calls the elytra "fere æqualia" but further on refers to them as having "elevated lines;" I presume this means that there are some scarcely elevated spaces on the elytra, and if this is the correct interpretation I have little doubt the insect before me is *S. subæqualis*. It cannot however stand in the same genus as *S. Adelaidæ*, Hope, which that learned author seems to have regarded as the type of his genus

Semanopterus. Although it is difficult to believe that Burmeister could have placed this insect in the genus *Scapanes* I may say that the description of *S. solidus*, Burm., reads much like a description of its female, examples of which not rarely present the peculiar coloring he attributes to *S. solidus*.

A. *subaequalis* (? Hope). Late subovatus; colore variabilis (nigro-piceus, piceus, vel rufescens); subtus rufo-hirtus; sat nitidus; fortiter convexus; capite transversim sat crebre rugato, tuberculo valido brevi armato; prothorace quam longiori paullo plus quam sesquialtiori, postice quam antice ut $1\frac{2}{3}$ ad 1 latiori, antice excavatione sat magna minus profunda (hac intus squamose sat grosse punctulata) et postice excavatione purva ovali (hac intus fortiter punctulata) impresso, lateribus minus rotundatis, subtilissime (antice crebrius, postice sparsim) punctulato, angulis anticis acutis sat productis posticis rotundato-obtusis; scutello basin versus punctulato; elytris subtiliter punctulatis, puncturis ut series 8 geminatim dispositis, interstitiis haud vel vix convexis inter serierum paria ut series (sed confuse sparsim) punctulatis, parte apicali confuse magis fortiter punctulata; pygidio fortiter gibboso.

Maris pygidio longitudinaliter leviter sulcato, sparsim subtiliter ad basin crebre subtilissime) punctulato; segmentis ventralibus (basali et apicalis parte basali crebre rugulosis exceptis) nitidis transversim uniseriatim punctulatis.

Feminae pygidio grosse squamose ruguloso, fulvo-hirto; segmentis ventralibus (apicali quam cetera magis crebre) squamose sat grosse rugulosis.

Australia; widely distributed.

SEMANOPTERUS.

This genus is placed by M. Lacordaire provisionally among the *Phileurides* on account of the general resemblance of Hope's figure to the appearance of a *Phileurus*. The labial palpi of *Semanopterus* are inserted low down on the sides of the mentum in such fashion that their basal joint is very little visible from above; nevertheless I cannot satisfy myself that the genus ought to be very widely separated from *Cheiroplatys* and its allies. The following characters in combination distinguish *Semanopterus* from the other known Australian *Dynastides*,—viz., Prothorax with two excavations in both sexes, hind tibiae with apical ciliae, basal joint of hind tarsi not excessively dilated at apex, club of antennae not extraordinarily developed in the male, three external teeth on the front tibiae, one of the two apical spines of the hind tibiae inserted more or less behind the base of the tarsus, mentum not of the compressed type, head armed with a blunt tubercle in

both sexes, clypeal suture wanting or very faint, sides of clypeus scarcely (or very feebly) sinuous, mandibles visible in repose, labrum not prominent, front marginal furrow of prothorax not angulated hindward in the middle, organs of stridulation wanting; claws of male simple.

The following is a tabulated statement of the distinctive characters of the *Semanopteri* known to me. *S. (Phileurus) subcostatus*, Cast., might be almost any *Semanopterus* but is probably *Adelaide*, Hope. *S. subæqualis*, Hope, is probably the insect for which I propose the new generic name *Asemantus*. I have seen no *Semanopterus* that agrees with the description of *S. depressus*, Hope, or *depressiusculus*, Macl. *S. convexiusculus* might possibly be identical with my *S. punctiventris*, but as the brief description of it implies that the hind corners of the prothorax are not excised, I think its identity very improbable.

- | | | |
|------|---|-------------------------------|
| A. | Sides of prothorax not (or scarcely) sinuate nor strongly incurved in front of base. | |
| B. | Pygidium (at any rate near its base) opaque through the presence of fine close strigosity. | |
| C. | Punctures of the pygidium near its apex quite isolated and very sparse | <i>Adelaide</i> , Hope. |
| CC. | The whole surface of the pygidium opaque through close strigosity in the female, rather closely and coarsely punctured near apex in the male | <i>meridianus</i> , Blackb. |
| BB. | Pygidium not opaque through close strigosity | <i>longicollis</i> , Blackb. |
| AA. | Sides of prothorax not or scarcely sinuate, but strongly rounded, and strongly incurved in front of base. | |
| B. | Pygidium pilose. | |
| C. | Sculpture of pygidium concentric in male | <i>concentricus</i> , Blackb. |
| CC. | Sculpture of pygidium not concentric in male | <i>angustatus</i> , Blackb. |
| BB. | Pygidium not pilose | <i>minor</i> , Blackb. |
| AAA. | Hind corners of prothorax (viewed from above) strongly excised. | |
| B. | Hind excavation of prothorax very lightly impressed. | |
| C. | The elytral costæ quite feebly developed. | |
| D. | Puncturation of prothorax much finer and sparser near the hind excavation than on the sides | <i>carinatus</i> , Blackb. |
| DD. | Puncturation of prothorax evenly distributed and comparatively strong | <i>persimilis</i> , Blackb. |
| CC. | The elytral costæ very elongate and well elevated | <i>tricostatus</i> , Blackb. |
| BB. | Hind excavation of prothorax deep and elongate-foveiform. | |
| C. | Anterior ventral segments not punctured in the middle | <i>rectangulus</i> , Blackb. |
| CC. | Anterior ventral segments punctured in the middle | <i>distributus</i> , Blackb. |

S. meridianus, sp. nov. Convexus; nitidus; piceus vel rufescens,

subtus fulvo-hirsutus; capite transversim rugato, tuberculo frontali armato; prothorace quam longiori fere sesquialtiori, profunde (interrupte vel continenter) canaliculato, sparsius subtilius (in canaliculæ fundo sat crasse squamose) punctulato, lateribus modice arcuatis postice vix sinuatis; scutello vix distincte punctulato; elytris tricostatis (sutura costata haud inclusa), costa externa fere obsoleta, interstitiis sat crebre subseriatim punctulatis, parte apicali crebre confuse punctulata.

Maris prothoracis canalicula antice leviter dilatata; pygidio antice crebre strigoso, postice crebrius sat fortiter punctulato.

Feminae pygidio toto crebre æqualiter strigoso. Long., $6\frac{1}{2}$ —9 l.; lat., $3\frac{1}{2}$ — $4\frac{1}{2}$ l.

This species is very like that which I take to be *S. Adelaide*, Hope, differing from it by the external of the three elytral costæ being almost non-existent and by the sculpture of the pygidium. In the male this segment is throughout more roughly sculptured, the basal strigose portion much narrower and the punctures of the apical portion coarser and closer. In the female the entire segment is closely and evenly strigose, while in *S. Adelaide* the apical portion is impressed more or less sparsely with isolated punctures on a nitid surface.

Western N.S.W.; Bindagundra; sent by Mr. Lea.

S. concentricus, sp. nov. Convexus; nitidus; piceus vel rufescens, subtus et in pygidio fulvo-hirsutus; capite transversim vel fere subconcentrice rugato, tuberculo frontali armato; prothorace quam longiori sesquialtiori, profunde canaliculato, sparsius subtilius (in canaliculæ fundo sat crasse squamose) punctulato, canalicula ante medium ut excavatio subcircularis (pone medium ut excavatio ovalis angusta) dilatata, lateribus fortiter arcuatis postice vix sinuatis; scutello fere lævi longitudinaliter subtiliter canaliculato; elytris tricostatis (sutura costata haud inclusa), costa externa fere obsoleta, interstitiis sparsim plus minusve seriatim punctulatis, parte apicali leviter crebrius punctulata.

Maris prothoracis canaliculæ excavatione antica sat profunda; pygidio sparsim hirsuto, concentrice rugato, in area centrali parva sat fortiter punctulato.

Feminae prothoracis canaliculæ excavatione antica minus profunda; pygidio dense hirsuto, prope basin crebre rugato, in cetera parte crebre æqualiter granuloso-punctulato. Long., 7 — $9\frac{1}{2}$ l.; lat., $3\frac{3}{4}$ — 5 l.

Differs from *Adelaide*, *meridianus*, and *longicollis* by the more strongly rounded sides of its prothorax which are strongly, but

scarcely sinuously, incurved close to the base. The costæ of the elytra are much like those of *meridianus*, but do not extend so far back and the intervals between them are more finely and less plentifully punctulate. This species is also distinguished from most of its congeners by the pilosity of its pygidium and from nearly all of them by the sculpture of that segment.

W. Australia; sent to me by Messrs. J. J. Walker and Lea.

S. angustatus, Blackb. This species is certainly rather close to *S. concentricus*, but I am convinced it is distinct. The principal difference seems to be that the costæ of its elytra are markedly feebler—in fact almost obsolete; and that its pygidium is in the male notably less closely (and not concentrically) strigose with a larger and more nitid punctured space in the centre in which the strigosity is much less distinct, while in the female the pygidium is (not closely granulose-punctulate but) confusedly and by no means closely strigose, with an evident intermixture of defined punctures—in fact not much different from the same segment in the male.

S. tricostatus, sp. nov. Convexus; nitidus; piceus; subtus fulvo-hirsutus; capite strigoso et sat distincte punctulato, tuberculo armato; prothorace quam longiori plus quam sesquialtiori, pone medium leviter canaliculato, sparsius (ad latera magis crebre) sat distincte punctulato, lateribus sat rotundatis ante basin sinuatis (superne visis profunde excisis apparentibus); scutello puncturis nonnullis impresso; elytris tricostatis (sutura costata haud inclusa), costis (ut *S. Adelaide*, Hope) bene elevatis et ad callum subapicalem continuis, interstitiis sat crebre subseriatim punctulatis, partibus lateralibus et apicalibus crebre confuse sed quam interstitia vix minus fortiter punctulatis.

Maris prothoracis canalicula ante medium ut excavatio circularis sat profunda dilatata; pygidio confertim subconcentrice rugato.

Fem. latet. Long., $7\frac{1}{2}$ — $8\frac{1}{2}$ l.; lat., 4— $4\frac{1}{2}$ l.

This is a very distinct species with strongly sculptured elytra almost exactly like those of the insect that I take to be *S. Adelaide*, Hope, but with a prothorax closely resembling the prothorax of *S. carinatus* and *persimilis*. A single male example sent by Mr. Cowley from N. Queensland seems indistinguishable but perhaps the knowledge of the females might reveal differences.

W. Australia; near Geraldton (Lea), &c.

S. distributus, sp. nov. Convexus; nitidus; piceus vel rufescens, subtus fulvo-hirsutus; capite transversim vel fere subconcentrice rugato, tuberculo armato; prothorace quam longiori sesquialtiori, profunde canaliculato, sparsius subtilius (in

canaliculæ fundo sat crasse squamose) punctulato, canalicula ante medium ut excavatio variabilis (pone medium ut excavatio ovalis angusta) dilatata, lateribus sat rotundatis ante basin sinuatis (superne visis profunde excisis apparentibus); scutello minus distincte punctulato; elytris tricostatis (sutura costata haud inclusa), costis internis ultra medium distinctis externa fere obsoleta, interstitiis sat crebre subseriatim punctulatis, partibus lateralibus et apicalibus crebre subtiliter confuse punctulatis; segmentis ventralibus anterioribus punctulatis.

Maris prothoracis canaliculæ excavatione antica sat profunda circulari, feminae minus profunda magis elongata; maris pygidio confertim subconcentrice rugato, feminae hirsuto crebre sat fortiter punctulato (antice et ad latera sat subtiliter rugato. Long., $7\frac{3}{4}$ —9 l.; lat., $4\frac{1}{5}$ — $4\frac{2}{5}$ l.

This species is very like *S. rectangulus*, Blackb. It is distinctly larger and more elongate and may be readily distinguished by its anterior ventral segments being quite coarsely squamose-punctulate and its pygidium pilose in the female.

Victoria and N.S. Wales.

PALMERSTONIA.

Under this name I separated the Australian species that had been attributed to *Horonotus*, chiefly on the ground of their females being devoid of prothoracic excavation or tubercle.

P. (Horonotus) variolicollis, Fairm. In Tr. Roy. Soc., S.A., 1895, p. 40, I expressed the opinion that this is likely to be identical with *P. (H.) optata*, Shp. I have received from Mr. Cowley examples of Dr. Sharp's species taken in N. Queensland and with them other examples that may possibly represent a distinct species and may be Fairmaire's very briefly described insect. They differ from typical *optatus* in having the cephalic-horn much shorter and of the form of an erect triangular lamina, and the coarse puncturation of the sides of the prothorax continuous across the base.

P. pusilla, sp. nov. Sat brevis; picea, supra nitida; subtus sat dense fulvo-hirsuta; prothorace grosse ruguloso; elytris vix punctulatis.

Maris capite lamina triangulari verticali armato; prothorace antice retuso; hujus parte retusa (area longitudinali mediana sat alta sparsim punctulata excepta) ut prothoracis superficie cetera crebre grosse rugulosa, haud ultra prothoracem medium extensa, postice tuberculo parvo armata.

Fem. latet. Long., $5\frac{1}{2}$ — $6\frac{1}{2}$ l.; lat., $3\frac{1}{5}$ — $3\frac{2}{4}$ l.

The males of the *Dynastides* vary to such an infinite extent in their sexual character that I cannot but recognise the possibility

of this pygmy turning out to be an extreme form of *P. optata*, Shp., but among half a dozen typical specimens of the latter I have seen none intermediate. The striking difference between this species and *P. optata* and *variolicollis* is the small size of the excavation of the prothorax (which does not reach back beyond the middle of the segment) its having at the middle of its hind margin only a minute tubercle; and the rough sculpture of the prothorax being continuous over the whole surface except a thinly punctulate area running along the middle of the excavated portion. The examples before me are undoubtedly males.

N. Queensland; sent by Mr. Cowley.

P. Bovilli, Blackb. I have received from Mr. Cowley a specimen taken in N. Queensland which I believe to be the male of this species. It is very large (long., $13\frac{1}{2}$ l.) and differs from *P. optata*, Shp., in its frontal horn being much shorter and resembling a triangular lamina with the apex bent hindward, in its prothorax almost punctureless (there are a few subobsolete punctures in the hind angles), in its prothoracic excavation very wide but only reaching back to the middle of the segment and having three strong pointed tubercles along its hind margin, and in the median opaque stripe on its propygidium occupying nearly the whole width of the segment so that only the extreme margins of the segment are less minutely sculptured.

NEOCAVONUS.

C. bidens, sp. nov. Sat nitidus; piceo-rufus, elytris nigris; subtus fulvo-hirsutus; elytris fortiter punctulato-striatis, striis vix geminatis, interstitiis fere lævibus.

Maris clypeo subverticali fortiter transverso vix manifeste punctulato, antice rotundato, basi fortiter carinato, marginibus fortiter reflexis; prothorace quam longiori sesquialtiori, antice late retuso, in margine anteriori tuberculo magno bifido armato, antice sat crebre subfortiter (postice minus distincte) punctulato; pygidio sat fortiter (antice et ad latera quam in ceteris partibus magis crebre) punctulato.

Fem. a mari differt prothorace æquali, antennarum clava quam ceteri articuli conjuncti paullo breviori, segmento ventrali apicali haud emarginato, tarsis posticis brevibus.

Long., 6 l.; lat., $3\frac{1}{2}$ l.

Easily distinguishable from its described congeners by the strongly bifid tubercle on the front margin of its prothorax.

S. Australia.

PIMELOPUS.

The following characters in combination distinguish *Pimelopus* among the Australian *Dynastides*,—viz., clypeus straight on

the sides, its front margin usually somewhat sinuate, its base feebly carinate and furnished in the middle with a feeble tubercle in the male; prothorax without any discal depression or elevation in either sex, usually with a small fovea on either side near the lateral margin and a feeble basal impression on either side of the middle; elytra more or less punctulate-striate, the striæ not geminate; antennal club small in both sexes; mentum evidently though not strongly compressed (considerably more ridge-like, e.g., than in *Cheiroplatys* or *Novapus*), mandibles in repose but little visible; front tibiæ tridentate in both sexes, posterior tibiæ bicarinate; apex of hind tibiæ ciliate, one of its apical spines inserted more or less behind the base of the tarsus; basal joint of hind tarsi short and very widely dilated at apex; claws simple in both sexes. M. Lacordaire asserts that there are organs of stridulation in two rows on the propygidium, but I have not succeeded in finding organs of stridulation in any *Pimelopus* that I have examined.

This genus is near my *Pseudopimelopus* which differs from it by the presence of a strong cephalic horn and a large prothoracic excavation in the male, and by the front claws being unequal in the same sex,—also by the sub-basal carina on the posterior tibiæ (especially the hind pair) being notably feebler and the rows of punctures on the elytra running in pairs.

I have already (Tr. Roy. Soc., 1887, p. 217) stated and given reasons for my opinion that Burmeister (and Lacordaire following his authority) was in error in thinking that the female on which Erichson formed the genus *Pimelopus* appertained to a species whose male exhibited the characters specified above as distinctive of *Pseudopimelopus*. I think there is no reasonable doubt in the matter and that consequently the only true *Pimelopus* described previously to 1887 was the typical species of the genus (unless *P. lævis*, Burm., be another; it is described on a female and almost certainly appertains to some other genus; at any rate is not as a species at all like any species known to me as congeneric with *P. porcellus*, Er.). In 1887 I added two species to the genus,—one of them doubtfully, but subsequent study confirms its place,—and I now have to describe another species of which I took a female some years ago in N.S. Wales and have since received both sexes (taken near Sydney) from Mr. Lea. The following table shows some of the distinctive characters of the species,—which are very closely allied and differ chiefly in the structure of the hind tarsi and the sculpture of the elytra. It is to be noted that as far as my observations go Lacordaire's statement that *Pimelopus* has organs of stridulation is incorrect (it does not appear that that author had seen a true *Pimelopus*), and also that the tubercle on the head of the female mentioned

by Burmeister and Lacordaire is scarcely noticeable; Erichson in characterising the genus did not mention either organs of stridulation or a tubercle on the head. I have before me a fairly long series of a species that is almost certainly *P. porcellus*, Er., with the description of which it agrees well. I described this species (Tr. Roy. Soc., S.A., 1887, p. 220) as "*P. porcellus*, Er. (?)" but subsequently have examined fresh series of it and think there is very little doubt of its being *porcellus*, and shall so consider it until evidence to the contrary turns up.

- A. The striæ and rows of punctures well defined to considerably behind the middle of the elytra.
 B. Hind tarsi very short, their third joint scarcely (in the female not) longer than wide ... *crassus*, Blackb.
 BB. Hind tarsi less short, their third joint markedly longer than wide.
 C. Subsutural region of elytra coarsely and rather closely punctured; subsutural striæ strongly impressed in front *porcellus*, Er.
 CC. Subsutural region of elytra lævigata or nearly so; subsutural striæ very lightly impressed *sydneyanus*, Blackb.
 AA. The striæ and rows of punctures scarcely reach the middle of the elytra *dubius*, Blackb.

P. sydneyanus, sp. nov. Ovatus; fortiter convexus; sat nitidus; ferrugineus, subtus hirsutus; capite ruguloso, clypeo antice leviter bisinuato; prothorace lævigato; elytris sat fortiter punctulato-striatis, striis longe ultra medium continuis (suturali in nulla parte fortiter impresso), interstitiis fere lævibus; pygidio ad basin crebre punctulato, in cetera parte lævi; tarsis posticis sat brevibus, articulo basali ad apicem extrorsum sat fortiter dilatato, articulo 3° quam latiori sat longiori.

Maris capite vix manifeste tuberculato.

The male is scarcely distinguishable from the female except by the emargination of the apical ventral segment and the greater convexity of its pygidium.

N.S. Wales.

ANEURYSTYPUS.

I characterised this genus in Tr. Roy. Soc., S.A., 1887, on a S. Australian species which I named *A. calvus*. Subsequently I have seen other species some of which I described in Pr. L.S., N.S.W., 1890, and I took the opportunity of writing those descriptions to mention that the generic characters I had drawn from the mouth organs of *A. calvus* did not seem to be truly generic as they were not exactly reproduced in other species that had come under my notice. The examination of still additional species confirms this observation and also shows an apparent difference in the form of the mentum even between individuals of

a species. I suspect however that this is more apparent than real as the mentum when the insect has its mouth open is more prominent than if the mouth be closed; this point could be cleared up only by dissecting a number of conspecific examples, but unfortunately these species are rare and I have not yet received or collected any in sufficient numbers for the purpose. But at any rate within the range of *species* that cannot possibly in my opinion be removed generically from *A. calvus* there is considerable variety in the mouth organs and especially in the mentum, some having the mentum only gently convex (as is the case with *A. calvus*) and others having it quite strongly compressed and even carinate down the middle line; in *A. calvus* the hind part is gently concave down the middle, the concavity however ceasing in the front part which is entirely convex. In *Corynophyllus* (as far as my observations go) the mentum is invariably flat (or at any rate notably less convex than in any *Aneurystypus*) and I think this is a reliable distinction between the genera which (as I have already pointed out) are also distinguishable *inter se* by the form of the antennal club, the joints of which are in *Aneurystypus* narrow elongate and parallel while in *Corynophyllus* the corresponding joints are much wider and are ovate in form. *Teinogenys* must be very near to *Aneurystypus* but no doubt differs as the described species are evidently quite unlike the described *Aneurystypi* as species. I have not an authentic type of *Teinogenys* and therefore do not feel able to speak authoritatively about it though I have little doubt I know it.

The following tabulated statement will show distinctive characters for the six described species of this genus:—

- | | | |
|-----|--|------------------------------|
| A. | Antennal club very long,—more than half again as long as the rest of the joints together. | |
| B. | Front of prothorax armed with a strong tubercle. | |
| C. | Clypeus subvertical | <i>calvus</i> , Blackb. |
| CC. | Clypeus nearly continuous in direction with the rest of the head | <i>aurilegulus</i> , Blackb. |
| BB. | Front of prothorax unarmed. | |
| C. | Clypeal suture carinate, armed with a strong median tubercle | <i>metallicola</i> , Blackb. |
| CC. | Clypeal suture feebly defined, unarmed | <i>collaris</i> , Blackb. |
| AA. | Antennal club much shorter. | |
| B. | Clypeus subvertical, narrow | <i>dives</i> , Blackb. |
| BB. | Clypeus much wider nearly continuing the plane of the rest of the head | <i>Richardse</i> , Blackb. |
| A. | <i>aurilegulus</i> , sp. nov. Mas. Castaneus; subtus dense longe fulvo-hirsutus; clypeo (hoc subhorizontali) squamose, vertice rugulose, prothorace sparsius minus subtiliter, scutello subtilius inæqualiter, pygidio sparsissime (ad latera sat crebre) punctulatis; elytris puncturarum seriebus circiter | |

10 minus regularibus (his vix geminatis) instructis, interstitiis (ex his nonnullis leviter convexis) punctulatis; antennarum flagello quam articuli ceteri conjuncti fere ut $1\frac{2}{3}$ ad 1 longiori; prothorace excavatione magna (hac fere ad basin extensa) impresso, antice tuberculo armato.

Fem. latet. Long., $7\frac{1}{2}$ l.; lat., $4\frac{1}{3}$ l.

The clypeus has the usual rounded outline and concave surface and almost continues the plane of the hinder part of the head instead of (as in some species) being sub-vertical. The clypeal suture is only moderately cariniform. The part of the head behind the clypeal suture is remarkably sculptured; from either end of the clypeal suture a strong carina runs sinuously backward and meets its fellow-carina at the back of the head thus enclosing a subtriangular flattened area. The prothoracic excavation is larger than in any other *Aneurystypus* or any *Corynophyllus* known to me. The elytral puncturation is (for this genus) exceptionally plentiful; there are about ten fairly distinct rows of punctures placed (not very noticeably) in pairs, the interstices between the two of a pair being irregularly a little convex and scarcely punctulate, while the others are punctured similarly to the series but somewhat confusedly.

W. Australia; taken by Mr. T. W. G. Blackburn near Coolgardie.

A. dives, sp. nov. Mas. Castaneus; subtus dense longe fulvo-hirsutus; clypeo (hoc subverticali) sparsius, vertice crebrius rugulose, prothorace sparsim subtiliter, scutello vix manifeste, pygidio sparsissime, punctulatis; elytris striis punctulatis; elytris striis punctulatis circiter 6 impressis, interstitiis in disco vix manifeste (parte laterali sparsim sat distincte) punctulatis; antennarum flagello quam articuli ceteri conjuncti fere ut $1\frac{1}{4}$ ad 1 longiori; prothorace excavatione transversa (hac in medio retrorsum anguste producta) leviter impresso, antice tuberculo acuto armato.

Fem. latet. Long., $7\frac{1}{2}$ l.; lat., $4\frac{2}{5}$ l.

At once distinguishable from the preceding species by its sub-vertical clypeus and the absence of carinæ behind the clypeus, also by the very faintly impressed and smaller excavation of its prothorax, its striate and much less punctulate elytra, the absence of comparatively close puncturation on the sides of the pygidium, &c.

W. Australia; Coolgardie; sent by Mr. Lea.

RHIPIDOCERIDÆ.

CALLIRRHIPIS.

C. cardwellensis, sp. nov. Mas.? Picea, subrufescens; sat nitida; capite verticali; prothorace quam longiori sesqui

latiori, subtilissime sparsius (antice paullo minus sparsim) punctulato, angulis anticis nullis posticis minutis acutis retrorsum directis, basi fortiter bisinuata; scutello sub-circulari fere lævi; elytris subtiliter sat crebre punctulatis et costis 4 vix manifestis instructis; antennarum lamellis in articulis 3°—8° gradatim magis elongatis, in articulis 8°—11° inter se sat æqualibus (his lamellis quam antenna tota circiter triplo brevioribus). Long., 10 l.; lat., 3½ l.

Differs widely from *C. ruficornis*, Gray (the only Australian *Callirrhypis* yet described) by its finely punctured and non striate elytra.

N. Queensland; Cardwell; in the collection of Mr. French.

LONGICORNES.

ANATISIS.

A. Muelleri, sp. nov. Mas. Piceus, elytris pedibusque rufescentibus; pilis (his in capite prothoraceque fulvis maculatim condensatis, in elytris abdomineque albis sparsim dispositis, in metasterni latere niveis dense lineatim condensatis) vestitus; prothorace brevi, grosse vermiculato-ruguloso, ad latera rotundato; scutello dense fulvo-piloso; elytris antice grosse (apicem versus obsolete) punctulatis, apice suturali spiniformi; antennis ut *A. laminosi*, Newm., laminatis. Long., 10 l.; lat., 3½ l.

Differs from *A. laminosus*, Newm., by its evidently shorter and wider form, its prothorax shorter, more rounded on the sides and more coarsely sculptured, its elytra with the sutural apex spiniform, their puncturation coarser, the coloring and arrangement of the pilosity, &c. Dedicated to the late Baron von Mueller.

N. Queensland; in the collection of Mr. French.

PHYTOPHAGA.

OIDES.

O. tigrina, Blackb. In describing this species at p. 81 (Part I.) of the present vol. I accidentally omitted to state that it was taken by Mr. Cowley in N. Queensland.

AULACOPHORA.

A. cucullata, Blackb. In describing this species at p. 83 (Part I.) of this present vol. I accidentally omitted to state that it was taken in N. Queensland and sent to me by Mr. Masters.